

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously presented) A magnetic recording head for writing data onto a magnetic recording medium, the head comprising:
 - a first pole and a second pole separated by a gap;
 - a coil structure traversing through the gap;
 - a waveguide extending through and within the gap, in a plane distinct from the first pole and the second pole; and
 - a closure partially connecting the first pole and the second pole disposed proximate a back of the first pole and the second pole, the closure including a first closure and a second closure split apart from each other whereby the waveguide extending therebetween without bending, turning, or extending within the first pole or the second pole so as to decrease a magnetic reluctance and increase a write efficiency of the recording head.
2. (Previously presented) The head of claim 1 wherein the waveguide travels through a split gap between the first closure and the second closure such that a light can travel in a straight path from an entrance of the waveguide to a write gap area of the head.
3. (Previously presented) The head of claim 2 wherein the light is transduced onto the magnetic recording medium.
4. (Previously presented) The head of claim 1 wherein the waveguide is disposed between the first pole and the coil-structure.
5. (Previously presented) The head of claim 1 wherein the waveguide is disposed between the second pole and the coil structure.

6. (Previously presented) A load beam assembly for transducing data with a concentric track of a magnetic recording medium, the assembly comprising:

a slider including an air-bearing surface;
a transducing head mounted on a trailing face of the slider, the transducing head having a first pole and a second pole separated by a gap; and
a waveguide extending generally straight down from near an upper edge to near a lower edge of the trailing face, the waveguide being disposed in a distinct plane between the first and second poles and extending within the gap without bending, turning, or extending within the first pole or the second pole so as to decrease a magnetic reluctance and increase a write efficiency of the transducing head.

7. (Previously presented) The assembly of claim 6 wherein a light source is attached near the trailing face.

8. (Previously presented) The assembly of claim 6 further including a closure partially connecting the first pole and the second pole a back of the first pole and the second pole, the closure including a first closure and a second closure split apart from each other whereby the waveguide extending therebetween without bending, turning, or extending within the first pole or the second pole so as to decrease the magnetic reluctance of the transducing head.

9. (Cancelled)

10. (Previously presented) The assembly of claim 6 wherein the transducing head further includes a transducing coil, the transducing coil extending between the first and the second poles.

11. (Previously presented) The assembly of claim 7 wherein the light source includes a light emitting face, and wherein the light emitting face is disposed generally opposing an upper face of the slider.

12. (Previously presented) The assembly of claim 7 wherein a power output of the light source is sufficient to cause heating of a portion of the magnetic recording medium located near a write gap to a Curie temperature of the magnetic recording medium.

13. (Previously presented) The assembly of claim 7 further including a flexure adapted for supporting the slider and the light source.

14. (Previously presented) The assembly of claim 13 further including a silicon bench assembly for changing a direction of a light beam exiting the light source.

15. (Previously presented) The assembly of claim 6 wherein a light source is attached to the trailing face, such that a face of the light source is in contact with the trailing face.

16. (Previously presented) A method of fabricating a head/load beam assembly for writing data to a concentric track of a magnetic recording medium, the method comprising:

- providing a slider having an air bearing surface;
- forming a transducing head on a trailing edge of the slider, the transducing head including a pole having a split back gap; and
- forming a waveguide on the trailing face of the slider, the waveguide extending through the split back gap, without bending, turning, or extending within the pole so as to decrease a magnetic reluctance of the transducing head.

17. (Previously presented) The method of claim 16 further comprising providing a light source near the trailing edge of the slider, wherein the light source has a power output from about 1 to about 25 mW.

18. (Previously presented) The method of claim 16 further comprising providing a light source near the trailing edge of the slider, wherein the light source includes a light emitting face, and wherein the light emitting face is in optical communication with a proximal end of the waveguide.

19. (Original) The method of claim 16 further comprising providing a flexure for supporting the slider.

20. (Previously presented) The method of claim 16 further comprising providing a transducing coil, wherein the waveguide extends in a distinct plane between the pole and the transducing coil.

21. (New) The assembly of claim 6 wherein the waveguide travels through the gap such that a light can travel in a straight path from an entrance of the waveguide to a write gap area of the head, and the light is translated onto the magnetic recording medium.